

CLAIMS

1. A peptide which is a fragment of Fas, for use in a method of treatment of the human or animal body by therapy.

2. A peptide according to claim 1 wherein said Fas is human Fas.

3. A peptide according to claim 2 wherein said fragment comprises an amino acid sequence selected from the group consisting of:

- (i) GQFCHKPCPPGERKARDCTV,
- (ii) QEGKEYTDKAHFSSKCRRCR,
- (iii) HFSSKCRRCRLCDEGHGLEV,
- (iv) EINCTRTQNTKCRCKPNFFC,
- (v) KCRCKPNFFCNSTVCEHCDP,
- (vi) WLCLLLLPIPLIVWVKRKEV,
- (vii) LIVWVKRKEVQKTCRKHRKE, and
- (viii) QKTCRKHRKE.

4. A peptide consisting of an amino acid sequence selected from the group consisting of:

- (i) GQFCHKPCPPGERKARDCTV,
- (ii) QEGKEYTDKAHFSSKCRRCR,
- (iii) HFSSKCRRCRLCDEGHGLEV,

- (iv) EINCTRTQNTKCRCKPNFFC,  
(v) KCRCKPNFFCNSTVCEHCDP,  
(vi) WLCLLLLPIPLIVWVKRKEV,  
(vii) LIVWVKRKEVQKTCRKHRKE, and  
5 (viii) QKTCRKHRKE.

5. A peptide of up to about 40 amino acids in length which comprises a fragment of Fas which modulates apoptosis and/or cellular proliferation.

10 6. A peptide according to claim 5 wherein the amino acid sequence of said fragment is found within an amino acid sequence selected from the group consisting of:

- (i) GQFCHKPCPPGERKARDCTV,  
15 (ii) QEGKEYTDKAHFSSKCRRCR,  
(iii) HFSSKCRRCRLCDEGHGLEV,  
(iv) EINCTRTQNTKCRCKPNFFC,  
(v) KCRCKPNFFCNSTVCEHCDP,  
(vi) WLCLLLLPIPLIVWVKRKEV,  
20 (vii) LIVWVKRKEVQKTCRKHRKE, and  
(viii) QKTCRKHRKE.

7. A peptide of up to about 40 amino acids in length, comprising a contiguous sequence of at least 10 amino  
25 acids which sequence has at least 80% similarity with a fragment of Fas, which peptide modulates apoptosis

and/or cellular proliferation.

8. A peptide according to any one of claims 1 to 7 which inhibits apoptosis.

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9. A peptide according to any one of claims 1 to 7 which stimulates apoptosis.

10. A peptide according to any one of claims 1 to 9 fused to heterologous amino acids.

11. A mixture of a plurality of different peptides according to any one of claims 1 to 10.

15 12. A composition comprising a peptide according to any one of claims 1 to 10 or a mixture of peptides according to claim 11, and a pharmaceutically acceptable excipient.

20 13. An isolated nucleic acid encoding a peptide according to any one of claims 1 to 10 or a mixture of peptides according to claim 9.

14. A method of making a peptide according to any one  
25 of claims 1 to 10 or a mixture of peptides according to claim 11, which method comprises providing nucleic acid

encoding the peptide or mixture of peptides in an expression system under conditions which cause or allow production of the peptide or mixture of peptides.

5 15. A method according to claim 14 further comprising isolating the peptide or mixture of peptides.

16. A method according to claim 14 or claim 16 further comprising formulating the peptide or mixture of  
10 peptides into a composition comprising at least one additional component.

17. A method according to claim 16 wherein said composition comprises a pharmaceutically acceptable  
15 excipient.

18. A method of obtaining one or more antibody molecules containing a binding site able to bind Fas, the method comprising bringing into contact a population  
20 of antibody molecules and a peptide according to any one of claims 4 to 8, and selecting one or more antibody molecules able to bind said peptide.

19. A method according to claim 18 wherein a said  
25 peptide is administered to a non-human mammal to induce a population of antibody molecules produced by the

mammal's immune system, then antibody molecules able to bind the peptide are taken from the mammal, or cells producing such antibody molecules are taken from the mammal.

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20. A method according to claim 18 wherein antibody molecules able to bind said peptide are selected from a recombinantly produced library of expressed immunoglobulin variable domains.

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21. A method according to claim 18 wherein the population of antibody molecules is obtained from a human prior to contact with a said peptide.

15 22. A method according to any one of claims 18 to 21 wherein an antibody molecule directed to a said peptide, or a mixture of antibody molecules directed to one or more said peptides, is obtained and is formulated into a composition comprising at least one additional  
20 component.

23. A method according to claim 22 wherein said composition comprises a pharmaceutically acceptable excipient.

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24. A method according to claim 23 further comprising

administration of the composition to a mammal.

25. An assay method for obtaining a substance which is a candidate modulator of Fas-mediated apoptosis, which method comprises:

(a) bringing into contact a peptide according to any one of claims 4 to 8 and a putative binding molecule or other test substance; and

(b) determining interaction or binding between the peptide and the test substance.

26. An assay method for obtaining a substance which is a candidate modulator of Fas-mediated apoptosis, which method comprises:

15 (a) bringing into contact an antibody molecule able to bind a peptide according to any one of claims 4 to 8 and a putative binding molecule or other test substance; and

(b) determining interaction or binding between the antibody molecule and the test substance.

27. An assay method for obtaining a substance which is a candidate modulator of Fas-mediated apoptosis, which method comprises:

25 (a) bringing into contact a peptide according to any one of claims 4 to 8, an antibody molecule which is

able to bind the peptide, and a test compound, under conditions in which in the absence of the test compound being an inhibitor, said peptide and said antibody molecule interact;

- 5 (b) determining interaction between said peptide and said antibody molecule.

28. A method according to any one of claims 25 to 27 further comprising testing a candidate modulator of Fas-  
10 mediated apoptosis for ability to modulate apoptosis and/or cellular proliferation.

29. An assay method for obtaining a substance which modulates Fas-mediated apoptosis, which method comprises  
15 contacting in a reaction medium Fas positive cells with a test substance and antibody molecule directed against a peptide according to any one of claims 4 to 8, determining the level of apoptosis and comparing that level with the level in a comparable reaction medium  
20 untreated with the test substance.

30. A method according to claim 28 or claim 29 wherein a substance which modulates apoptosis and/or cellular proliferation is provided in a composition comprising at  
25 least one additional component.

31. A method according to claim 30 wherein said composition comprises a pharmaceutically acceptable excipient.

5 32. A method according to claim 31 further comprising administration of the composition to a mammal.

33. A method of treatment comprising administration of a peptide according to any one of claims 1 to 10, a  
10 mixture of peptides according to claim 11, a composition according to claim 12, or nucleic acid according to claim 13, to a mammal.

34. A method of treatment comprising administration of  
15 an antibody molecule specific for a peptide according to any one of claims 1 to 10, or a mixture of antibody molecules specific for one or more said peptides, to a mammal.

20 35. Use of a peptide according to any one of claims 1 to 10, a mixture of peptides according to claim 11, a composition according to claim 12, or nucleic acid according to claim 13, in the manufacture of a medicament for treatment of a mammal.

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36. Use of an antibody molecule specific for a peptide



according to any one of claims 1 to 10, or a mixture of antibody molecules specific for one or more said peptides, in the manufacture of a medicament for treatment of a mammal.

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37. An isolated human antibody molecule or mixture thereof specific for human Fas.

38. An antibody molecule or mixture according to claim 10 37 which is specific for a peptide according to any one of claims 1 to 10.

40. An antibody molecule or mixture according to claim 37 for use in a method of treatment of the human or 15 animal body by therapy.